10/512,133

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*** YOU HAVE NEW MAIL ***

=> s dendrimer (4a) phosphorus
L1          117 DENDRIMER (4A) PHOSPHORUS

=> s l1 and solid support
L2            3 L1 AND SOLID SUPPORT

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3            3 DUP REM L2 (0 DUPLICATES REMOVED)

=> d l3 bib abs 1-3

L3   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:765903  CAPLUS
DN   145:329078
TI   Magnetic bead-based solid phase for selective extraction of genomic DNA
AU   Archer, Marie J.; Lin, Baochuan; Wang, Zheng; Stenger, David A.
CS   Center for Biomolecular Science and Engineering, Naval Research
     Laboratory, Washington, DC, 20375, USA
SO   Analytical Biochemistry (2006), 355(2), 285-297
     CODEN: ANBCA2; ISSN: 0003-2697
PB   Elsevier
DT   Journal
LA   English
AB   Magnetic bead-based solid phases are widely used for the separation of nucleic
     acids from complex mixts.  The challenge to selectively sep. specific DNA
     mols. (via complementary hybridization) in a single step is the selection
     of a linker between the capture probe and the solid
     support that can be exposed to high temps. in the presence of a
     high salt media.  This article presents a general platform for the
     fabrication of a magnetic bead-based selective solid phase that can be
     used for subtractive hybridization or sequence capture applications.
     Phosphorus dendrimers are used for the first time as linkers in a magnetic
     bead-based selective solid phase for capture of genomic DNA.  Aside from
     providing a high loading capacity, they render a stable bond between the
     capture probe and the surface under the high temperature and salt conditions
     required for denaturation and capture to proceed in a single step.  The
     thermal stability of the solid phase under these conditions is first
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demonstrated by hybridizing a Cy3-labeled target. The selective capture of DNA targets in a single step is then demonstrated by subtractive hybridization of fragmented human genomic DNA. The specificity and selectivity of the solid phase are demonstrated by the recovery of adenovirus serotype 4 DNA spiked into the human DNA target. The effect of steric and electrostatic constraints was also investigated by using dendrimers of different generations that vary in their size and the number of branches. The results demonstrate that this platform can be used for single-step subtractive hybridization applications with better performance over the conventional two-step method using streptavidin-coated magnetic beads.

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 3 USPATFULL on STN
AN 2005:247572 USPATFULL
TI Solid supports functionalised with phosphorus dendrimers, method for preparing same and uses thereof
IN Trevisiol, Emmanuelle, Cornebarrieu, FRANCE
Leclaire, Julien, Toulouse, FRANCE
Pratviel, Genevieve, Toulouse, FRANCE
Caminade, Anne-Marie, Toulouse, FRANCE
Francois, Jean, Castenet, FRANCE
Majoral, Jean-Piere, Ramonville, FRANCE
Meunier, Bernard, Castenet, FRANCE
PI US 2005214767 A1 20050929
AI US 2003-512133 A1 20030417 (10)
WO 2003-FR1231 20030417
20050525 PCT 371 date
PRAI FR 2002-5049 20020423
DT Utility
FS APPLICATION
LREP ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE 4000, CHARLOTTE, NC, 28280-4000, US
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 1051
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to solid supports functionalized with phosphorus-containing dendrimers, to a process for preparing them, to their use for preparing biochips and to the uses of these biochips, in particular for immobilizing molecules of interest, especially biological molecules of interest such as nucleic acids, polypeptides, lipids and proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 3 OF 3 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
AN 2003-856187 [80] WPIDS
DNC C2003-241678 [80]
TI Solid support carrying functionalized dendrimer, useful for immobilization or synthesis of e.g. nucleic acids or proteins, particularly as biochip for studying interactions
DC B04; D16
IN CAMINADE A; CAMINADE A M; FRANCOIS J; LECLAIRE J; MAJORAL J; MAJORAL J P; MEUNIER B; PRATVIEL G; TREVISIOL E
PA (CAMI-I) CAMINADE A; (CNRS-C) CENT NAT RECH SCI; (CNRS-C) CNRS CENT NAT RECH SCI; (FRAN-I) FRANCOIS J; (INRG-C) INRA INST NAT RECH AGRONOMIQUE; (LECL-I) LECLAIRE J; (MAJO-I) MAJORAL J; (MEUN-I) MEUNIER B; (PRAT-I) PRATVIEL G; (TREV-I) TREVISIOL E
CYC 102
PIA FR 2838737 A1 20031024 (200380)* FR 50[7]
WO 2003091304 A2 20031106 (200401) FR

AU 2003246839 A1 20031110 (200442) EN
EP 1501842 A2 20050202 (200510) FR
AU 2003246839 A8 20031110 (200559) EN
US 20050214767 A1 20050929 (200564) EN

ADT FR 2838737 A1 FR 2002-5049 20020423; AU 2003246839 A1 AU 2003-246839 20030417; AU 2003246839 A8 AU 2003-246839 20030417; EP 1501842 A2 EP 2003-747145 20030417; WO 2003091304 A2 WO 2003-FR1231 20030417; EP 1501842 A2 WO 2003-FR1231 20030417; US 20050214767 A1 WO 2003-FR1231 20030417; US 20050214767 A1 US 2005-512133 20050525

FDT AU 2003246839 A1 Based on WO 2003091304 A; EP 1501842 A2 Based on WO 2003091304 A; AU 2003246839 A8 Based on WO 2003091304 A

PRAI FR 2002-5049 20020423

AN 2003-856187 [80] WPIDS

AB FR 2838737 A1 UPAB: 20060120

NOVELTY - Solid support (A) has at least one surface covalently functionalized by a phosphorus-containing dendrimer (B) that comprises:

(i) a central core, containing at least two functional groups; and

(ii) at its periphery several functional groups that allow attachment, or in situ synthesis, of molecules of interest (C).

(B) has size 1-20 nm.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) preparing (A);

(2) biochip or 'dendrichip' comprising (A) with (C) covalently attached to it; and

(3) preparing the chips of (2).

USE - (A) are used for immobilization and/or in situ synthesis of nucleic acids, lipids, proteins and their molecular partners, especially for preparation of biochips, e.g. for performing nucleic acid hybridization, antigen/antibody or ligand/receptor binding assays.

ADVANTAGE - (A) can be stored for at least 2 months without alteration in the peripheral functional groups, and provide chips with very low background and which can be reused, without significant loss of signal or increase in background, so costs are reduced and statistically accurate data are produced. The biochip is produced in only a few stages, under controlled, reproducible and undemanding conditions. The multiple anchoring sites on the dendrimer ensure high stability.

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